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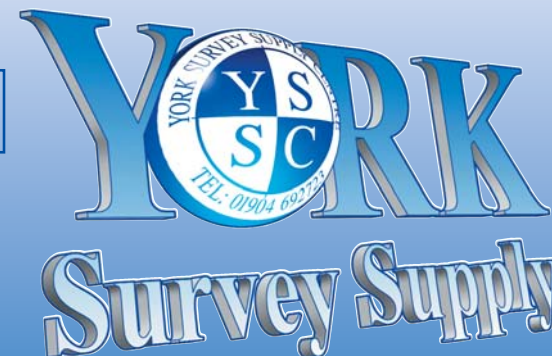
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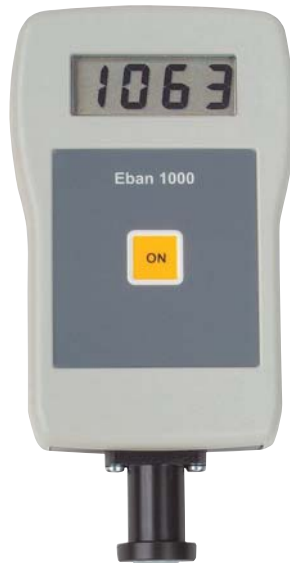
Coating Thickness Meter



Code: 34600

Operating Instructions

Coating Thickness Meter



General

The EBAN2000 is a digital coating thickness which is supplied in two versions: EBAN2000 (F) which will measure coatings on ferrous substrates.

Examples are paint, epoxy, powder coating, plastic, glass flake, zinc, cadmium, chrome, galvanising, etc. on steel and iron.

EBAN2000 (N) which will measure coatings on non-ferrous substrates.

Examples are paint, epoxy, powder coating, plastic, glass flake, anodising on aluminium, brass, copper and the austenitic steel alloys.

The EBAN2000 is a very simple to use instrument and has two modes of operation.

The first mode is a *Direct Reading Coating Thickness Meter* which will give the measured coating thickness value in microns when the probe is placed on the coating. The second mode gives a *very fast pass/fail facility* using two coloured indicators on the front panel.

The pass limit is easily set using the top control and then each time the probe is placed on the coating the indicators will show if the coating being measured is **H**igher or **L**ower than the set limit.

The EBAN2000 is supplied complete with a detachable flexible constant pressure measuring probe, set of precision measured calibration foils, battery, carrying case, trimming adjustment tool and operating instructions.

The EBAN2000 has been calibrated at the factory prior to despatch and will not normally require recalibrating prior to use.

Specification

Measurement Range: 0-1000 micron
Accuracy: Better than $\pm 1-3\%$ $\pm 1-3$ micron
Resolution: 1 micron
Direct reading measurements per minute: 45
Pass/Fail measurements per minute: 100 plus

Operation

The EBAN2000 will normally be supplied with a battery fitted. Connect the probe connector plug to the socket located at the top right hand side of the EBAN2000.

Direct Reading Mode

To switch EBAN2000 on press the MODE key once. A high reading will be shown on the digital display. The EBAN2000 is now in Direct Reading Mode and will give a measurement display in microns when the probe is placed on the coating to be measured.

Pass/Fail Mode

Press the MODE key again and one of the **HI** or **LO** indicators will illuminate showing that the Pass/Fail Mode has been selected.

In this mode it is possible to set a pass or fail limit by turning the top left hand control until the display registers the required limit value and then observe the **HI/LO** indicators when the probe is placed on the coating. If the **HI** indicator is illuminated with the probe on the coating then the coating value is higher than the set limit. If the **LO** indicator is illuminated with the probe on the coating then the coating value is lower than the set limit. If both indicators just flicker on and off together then the coating thickness value equals the set limit. This unique facility can prove to be extremely useful when large areas have to be tested.

Switching Off

To switch the EBAN2000 off press the MODE key for a third time.

Useful Information

It is recommended that for measurements on small curved surfaces that the EBAN2000 be calibrated on a similar uncoated curved substrate.

A 'V' adaptor is available as an extra to allow easy probe placement on curved surfaces.

When using the Pass/Fail mode and a failure location is found then the actual value can be obtained by pressing the MODE keypad twice to enter the Direct Reading Mode.

Warranty

The EBAN2000 instrument only is guaranteed for a period of twelve months against failure due directly to a manufacturing defect or faulty component.

The measuring probe is an expendable item and is guaranteed for one month only.

Any defect due to user damage and wear will not be covered by warranty.

Certification

As an optional extra the EBAN2000 can be certified with traceability to NAMAS with the results being given for a

specific calibration.

The precision measured foils supplied with the EBAN2000 can be certified traceable to NAMAS.

Calibration

Calibration Information

As supplied the EBAN2000 has been calibrated by the factory and will not normally require immediate recalibration.

The EBAN2000 has a variable calibration facility to allow for more accurate measurements on differing substrate types. Located at the top of the EBAN2000 are two preset 10 turn controls, each control is recessed allowing adjustment only by using the special trimming tool.

This is a useful feature which will prevent accidental adjustment of the calibration once set.

The control nearest the probe connector is the Preset Zero and the other is the Preset Cal.

Each control is clearly identified on the rear of the EBAN2000.

Calibration

To calibrate, switch the EBAN2000 on by pressing the MODE key once to select Direct Reading Mode. Stand the EBAN2000 upright and place the measuring probe on an uncoated section of the substrate. (A Precision Aluminium Zero Plate is available as an extra for this purpose).

Using the Trimming Tool supplied (screwdriver end) turn the Zero Preset control until the display registers 000. Note that this preset control is a 10 turn control and has slipping clutches at each end.

Turning the control clockwise will increase the reading and conversely turning anti-clockwise will reduce the reading.

Now place a Calibration Foil (select a value nearest to the coating to be measured 'but higher' for the highest accuracy) on the same uncoated substrate.

Place the probe on this foil and using the Trimming Tool turn the Cal Preset until the digital display registers the foil value.

Recheck both the Zero and Cal and readjust if necessary. Remember always adjust the Zero Control first and the Cal Control last.

It is recommended that for measurements on different substrate material types and shapes, that the EBAN2000 be calibrated on an uncoated section of substrate that is identical to that which the coating will be applied.

Additional Information

When taking measurements always hold the outer probe moveable sleeve and place the probe tip carefully on the surface.

The EBAN2000 (N) has a Jewel Tip on the probe and it is possible to slide this tip across smooth coatings thus allowing any changes to be quickly seen.

It is possible to measure coating thicknesses close to edges and holes.

Ensure that the probe body does not overhang the edge. Always keep the calibration foils free from dirt and grease. Replace when they show any signs of indentation.

To remove the probe plug pull back the outer locking sleeve and gently withdraw the probe plug.

Battery Replacement

A battery warning will appear on the digital display when the battery requires changing.

The battery type is PP3 and an alkaline leakproof type is recommended.

For battery replacement slide off the rear bottom cover and replace the battery ensuring the correct polarity.

Statistical Measuring

The EBAN2000 can be used to quickly give a simple statistical evaluation of the coating.

Select Pass/Fail mode and take a number of measurements whilst turning the top Pass/Fail Control and use the LO indicator to establish a measured value where all measurements are below.

Then repeat the same number of measurements using the HI indicator and establish a measured value where all measurements are above.

This then shows the spread of the measured values where the mean can be established.

Should further analysis of the measurements taken by the EBAN2000 be required, a low cost Data Analysis Program is available which will allow a standard PC to be used to give specialised SPC analysis and full printouts of all measurements and results.

Servicing and Recalibration

It is recommended that this precision instrument be returned on an annual basis to **York Survey Supply Centre** for service and recalibrations.

Special Probes

A special right angle touch probe is available as an extra. This will allow measurements to be made inside box sections, etc.

EMC

The EBAN2000 has been tested by an independent NAMAS test house and meets the requirements of BS EN55022.

Self Testing

The EBAN2000 can be checked for correct operation at any time by using the precision measured calibration foils provided.

Simply place the foil on a smooth uncoated section of mild steel.



Use of the Precision Ground Zero Plate is recommended. Place the respective measuring probe onto the particular foil and ensure that the measurement made by the EBAN2000 is within the specification of the instrument.